

EFFECTS OF EMPLOYING THE TEXT, SRA DECODING STRATEGIES ON THE WORD RECOGNITION FOR A HIGH SCHOOL STUDENT WITH LEARNING DISABILITIES

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ABSTRACT

An objective of this study was to evaluate the effects of employing the SRA Decoding Strategies text on word recognition for a ninth grade male with a learning disability. The student was enrolled in a high school special education resource room in a large urban school district in the Pacific North west in a direct instruction reading resource room. A multiple baseline design across three sets of sight words was used to test the effectiveness of the decoding program. The overall results indicated that the program worked well with the participant. The decoding strategies generalized to novel words for which he had not received any training. The efficacy of employing direct instruction procedures with high school students with learning disabilities was discussed in this paper.

Keywords: SRA (Scientific Research Associates), Decoding Strategies, Direct Instruction, Sight Words, Decoding, Learning Disabilities, High School Student, Multiple Baseline Design, Literacy, IEP (Individual Education Plan)

INTRODUCTION

Every year in the United States over 1.2 million teenagers dropout of high school. This is due to falling too far behind in classes. Most of these students are either far behind in reading, or completely illiterate [1]. Those who drop out of high school make an average of \$200,000 less in their lifetime than those who graduate [17]. A study that was commissioned by the U. S. Department of Education found that 32 million Americans were illiterate in 2013. The same study also found that 19% of high school graduates are not able to read. Many times these students are being passed along without receiving the necessary skills to succeed when they leave school [19]. People who are illiterate make an average of 30-40% less than those who are literate, and are not able to acquire more vocational education due to their lack of reading abilities [3], [16]. Parents are often unable to provide the necessary requirements at home to improve literacy [11]. Illiteracy leads to poor health because of a lack in receiving health-related information and messages.

Those students with learning disabilities have an

increasingly high risk of graduating without being literate, due to an education system that allows students to be passed along without having the necessary skills [14]. Learning disabled students are often described as "inactive learners" who lack self-monitoring skills which leads to incorrect use of reading strategies taught in schools [9],[18]. The students are falling further and further behind their non-disabled peers. The ability to read efficiently has clear implications to overall academic success, and by teachers providing students with intense and explicit reading instructions, students are likely to show improvement in all academic subjects [14].

Direct Instruction reading materials promote mastery in reading through explicit teaching with an emphasis on fast pace, well-sequenced lessons [15],[4]. The text, SRA Decoding Strategies [6] is a direct instruction reading intervention that employs well-sequenced lessons that have shown to improve reading skills of learning disabled students of all ages. This intervention appears to work best for students with learning disabilities [15]. This is because due of the low-skill entry criteria and the text presents a wide range of decodable words that should promote the

necessary skills needed for more difficult reading.

One objective of this study was to evaluate the effects of using SRA Decoding Strategies [6] on word decoding of a ninth grade male with a learning disability. An additional objective was to evaluate the efficacy of these procedures in a high school classroom. This would provide a replication [10] for our research employing Direct Instruction [2];[7];[8] in a different classroom with a different classroom teacher.

Method

Participant and Setting

The participant was a 15-year-old 9th grade male student. His IEP indicated that he was diagnosed with a learning disability. He received services in a resource room for reading because he was only reading at a 2nd grade level. The participant told the authors that he enjoyed school. His attendance was excellent throughout the data collection. When not working on reading lessons, the participant spent his time in class completing homework that was due that day.

The study was conducted in a resource classroom located in a large public high school in the Pacific Northwest. The special education high school resource room employed a large amount of on direct instruction materials to assist students with their reading difficulties. The resource room was staffed with a certified special teacher and instructional assistant. Once a week a volunteer from the community would spend the day in the classroom. Nine students were in the classroom when data were taken. Many of these students were enrolled in general education classes most of the day. The study took place during second period, twice a week, between 9:00-10:00 a.m. every Tuesday and Thursday for 10 weeks. The study was conducted by the first two authors who were completing degree requirements for an undergraduate degree in Special education from a local private university [15]

Materials

The materials included the SRA Decoding Strategies text [6], data sheets, and flash cards. The text employs direct instruction intervention to help with letter sounds, word

decoding, comprehension, and fluency. Twenty three flashcards were used to collect data on whether intervention was working or not. One target word was written on the front of each index card. Data sheets contained the decoding words were found in the lessons of intervention and on the flash cards.

Dependent Variable

The dependent variable was decoding words from word list in the SRA Decoding Strategies book. Participant was shown the flash cards, and if he reads correctly within 3 seconds, it was scored as correct. If the student says the word incorrectly and then self-corrects the word within three seconds, the word is still counted as incorrect. If the participant did not respond at all, or said skip, the word was again counted as incorrect. Data were collected through the use of flash cards. One word was written per flash card and the cards were shuffled to ensure that participant was not memorizing the order of the cards.

One of the author would hold up a card for the participant to see, while the other author took data. The card was held for 3 seconds. This was timed by looking at the clock or using a timer. A data sheet was used to record the data.

Design

A multiple baseline design [10]; [12] across three sets of words was used to test the effects of the Reading Mastery program on the participant. The words came from the lessons, Set 1 from lessons 5-10, Set 2 from lessons 11-15 and Set 3 from lessons 16-19. Intervention was presented in a staggered fashion, as words appeared in the lessons. There were three sessions of baseline for Set 1, ten sessions for Set 2 words and 14 sessions for Set 3 words. There were ten sessions of intervention for Set 1 and four sessions for Set 2. The author ran out of time to intervene on Set 3 because of the university calendar. At the completion of lessons for Set 1, there were two words, "fled" and "strapped" that the participant had not mastered. The researchers redid the lessons with these words, which helped the participant succeed in mastering those words. In general, an upward trend in the data was necessary to move on to the next intervention for Set 2, to show that the participant was learning to decode words by using the

Decoding program prior to intervening in Set 2.

Baseline

During baseline, the participant was provided with a list of 150 words (10 words each from Lessons 5-19 in the Reading Mastery program book) to read, which was used as a pretest. The first two had another copy of the list of the words. As the participant read the words, the researchers marked which words were incorrect. If the participant took more than ten seconds to read a word, the first two authors would suggest that he move on to the next word. If the participant asked to skip a word, the researchers would let him and mark as incorrect. The researchers did not indicate to the participant if he read the word correctly or not. The participant was provided consequences to keep on reading the words, including an occasional nod or "okay" from the first two authors.

SRA decoding strategies

During this intervention, the participant and both researchers each had their own text. Lessons 5-14 were taught. The lessons were taught by the format of the book. There were usually two boxes of words per lesson and then on a story. In the first box of words, the participant said the underlined sound and then read the word. If he said an incorrect sound or word or did not respond, the researchers immediately told him the correct way to say the sound or word, had him say it, then went back 2 or 3 words, in a model, lead, test correction procedure. In the second box of words, the participant read the words row by row. The same correction procedure was used if he missed a word or did not respond. The third part of the lesson was the story, which was about a page. When the participant said a word incorrectly, the same correction procedure was used. However, the participant was asked to begin the sentence again, after the researcher told him the word and he said it. If the participant self corrected himself right away, he could keep on reading and no correction procedure was used.

Throughout the intervention, some praise, such as "good job" or "that's right," was used to affirm the participant that he was saying words correctly. Less praise, a simple nod or a, "Mhmm," was used during the story, to avoid

interrupting the flow of the story. After the participant finished reading the story, intervention was over and the participant could work on homework.

Interobserver Agreement

Interobserver agreement was collected for 76% of the sessions. One author used the data collection sheet to record correct and incorrect answers as the participant was reading the words. The other author, who was testing the participant, separated the cards into two piles, correct and incorrect, and later filled out the data sheet. The researchers recorded data independent of each other. These data were then compared by point-by-point agreement ratio, seeing if all the marks ("+" or "-" signs) were the same or not. Average agreement was 95% with a range of 90 to 100%.

Results

The results of the participant's intervention are displayed in Figure 1. During baseline for Set 1, the mean for words correctly read within three seconds is 0%. During intervention for Set 1, the participant read words correctly an average of 72% (range 44-100%). During baseline for Set 2 the mean for words correctly read was only 8.4% (range 0-28%). Once the decoding procedures were employed, the average words read correctly by the participant increased to 34% (range 14-71%). The average of words read correctly for Set 3 baseline was 26% (range 0-50%).

Discussion

The SRA decoding program worked well with the participant. He was able to improve his skills in learning to read novel words that he could not read in baseline. He was also able to continue to read these words after the intervention. For example, the participant went from reading 0% of the words correct in Set 1 to reading those words correctly 72%. Not only was the program successful for the student, it also made the student willing to work with the authors, to read the words, and complete the lessons. Though the participant was academically challenged due to his low reading level, the participant always tried and did his best to decode words. He had his own strategy of saying the word three times in his head after the

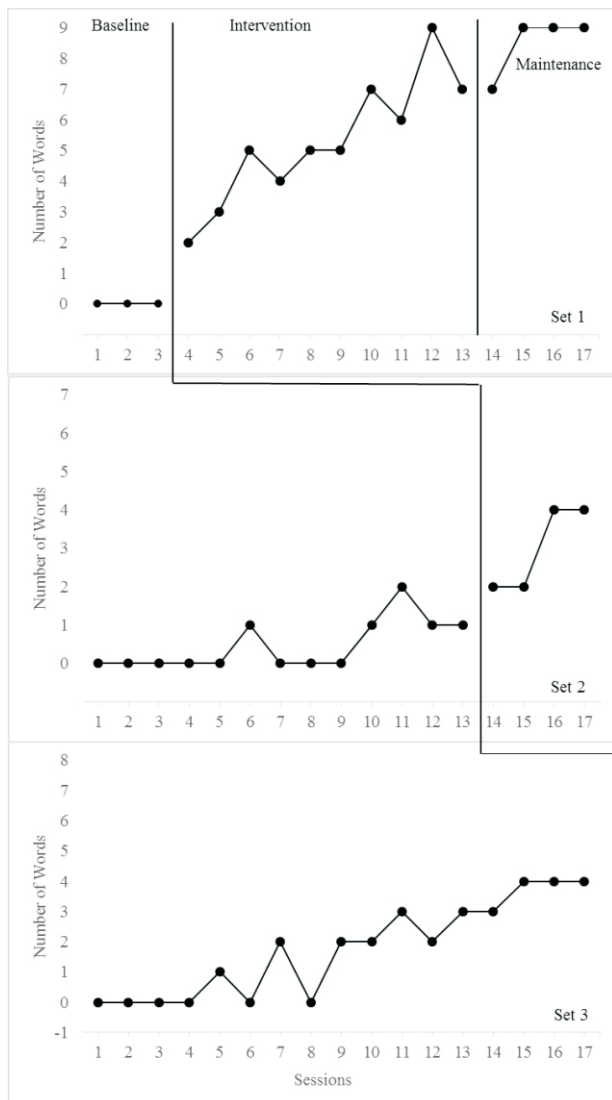


Figure 1. The number of correct sight words in baseline for Sets 1 through 3 in baseline and using the SRA Decoding text (Intervention), and for maintenance for Set 1 sight words.

researchers told him the correct pronunciation. He had developed this strategy on his own so he could remember how to say the word.

The results indicated that the participant began reading words correctly before intervention began on them. For example, the participant went from 0% to 8.4% for Set 2 words before the use of the decoding text began. His performance also increased from 0% to 26% for Set 3 words before any intervention. However, the author felt the participant did acquire new words in Set 1 from the intervention because he would read the words correctly the next day after teaching that particular word from the text. The researchers trained that the participant read

daily, and using strategies learned in the Reading Mastery program and generalizing them to read new words correctly on his own.

The participant was pleased to be reading words at a much quicker and accurate rate during the time the flashcards were presented. From the beginning, the participant took several seconds to try to read each word, but at the end he confidently read the words correctly that he knew, within one second. The classroom teacher was excited at the participant's progress in mastery of Set 1 words. The teacher believed that the participant's success with Set 2 and Set 3 words before intervention, was a testimony to the efficacy the Reading Mastery [5] that was employed in the classroom to teach him strategies to decode words on his own.

The present outcomes adds to the data on direct instruction methods that can be employed with older students who struggle with their reading. The cost of the decoding text was minimal and this text was already part of the reading materials in the high school classroom. Therefore, there was no expense for the researchers. The program did not require an extensive amount of time to implement. The first two authors had a 50-minute time period in which to work with the student. However, the participant also needed time to do homework for other classes. Each lesson took approximately 20 minutes to complete. Effort to present the lessons was minimal. This was especially true because of the knowledge that the first two authors had regarding the use of Direct Instruction and the model, lead, and test error correction procedures from their two required university courses in Direct Instruction.

Limitations

A minor limitation of this study was time constraint which did not allow the authors to teach the participant additional decoding strategies that went beyond the practice of decoding and reading words in the text. At times, the participant had particular trouble with decoding words of single or double consonants. It would have been beneficial to have the time to teach him the rule about saying the name of the letter when there is one

consonant following the vowel and saying the sound of the letter when there are two consonants following the vowel. More research with additional students using the decoding procedures need to occur.

Summary and Conclusions

The findings of this study demonstrate the decoding program went beyond teaching students simply individual words. The text teaches useful decoding strategies so that students can use those to decode novel words. The authors also felt that their instruction allowed the participant to learn new words. Also, since he read daily, he was able to decode and read new words on his own. The participant's special education classroom teacher will continue using it with the student if there is time during class to complete a lesson with the student. Finally, the positive outcomes replicate much of the research (Shippen et al., 2005) that suggests it need to employ explicit and systematic instruction in reading. And this is especially true for students who are having issues and difficulties in reading in middle and high school.

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